UNITED STATES PATENT AND TRADEMARK OFFICE

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09/826,065	04/04/2001	Jerome A. Otto	9431.00	2388

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Paul W. Martin
NCR Corporation
Law Department, ECD-2
101 West Schantz Avenue
Dayton, OH 45479-0001

EXAMINER
FUREMAN, JARED

ART UNIT	PAPER NUMBER
2876	

DATE MAILED: 07/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-12_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-12_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _04 April 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _4 and 5_ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Receipt is acknowledged of the IDS, filed on 6/25/2001, and the IDS, filed on 9/14/2001, which have been entered in the file. Claims 1-12 are pending.

Specification

1.   The disclosure is objected to because of the following informalities: There is no brief description of figure 4.

Appropriate correction is required.

Claim Objections

2.   Claims 10-12 are objected to because of the following informalities: Claims 1-12, line 1: --(RF)-- should be inserted after "frequency", in order to clarify the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1-7 and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Blama (US 5,444,223, cited by applicants).

Re claims 1 and 2: Blama teaches a method of identifying an item (an item associated or attached to a tag 10) comprising the steps of: transmitting a plurality of different first signals (signals transmitted by the interrogator 22) having a plurality of different frequencies (see column 7 lines 11-28); receiving second signals (signals from

a circuit, C_1 for example, resonating at a particular frequency transmitted by the interrogator 22) having second frequencies from an item label associated with the item; determining third frequencies associated with the item label which were not received from the item label (for example, the interrogator 22 transmits a frequency at which there is no resonant circuit on the tag 10); and determining an item identification number from the second and third frequencies, including the substeps of assigning first values equal to a first binary value to first data bits occupying first data bit positions in the item identification number for the second frequencies (if a circuit resonates at a particular frequency, then a binary "1" is assigned, see column 5 line 51-58); and assigning second values equal to a second binary value to second data bits occupying second data bit positions in the item identification number for the third frequencies (if no circuit resonates at the particular frequency, a binary "0" is assigned, see column 5 lines 58-66); receiving a fourth signal having a fourth frequency from the item label (a signal from circuit C_2, for example); and determining from receipt of the fourth signal that the second signals were from the item label (the receipt of the second and fourth signals are used to determine a tag identification number, and thus determine that the signals were received from a particular tag) (see figures 1a, 2, 4a, 6, column 3 lines 25-46, column 4 lines 24-36, column 4 line 59 - column 6 line 40, column 6 lines 50-59, and column 7 lines 11-28).

Re claims 3 and 4: Blama also teaches a method of identifying an item (an item associated or attached to a tag 10) comprising the steps of: interrogating antennas (coils 12) affixed to the item as part of an item label (tag 10); receiving first different

frequencies from the antennas (signals from circuits, C_1-C_N for example, each

resonating at a particular frequency transmitted by the interrogator 22); determining

second different frequencies associated with the item label which were not received (for

example, the interrogator 22 transmits a frequency at which there is no resonant circuit

on the tag 10); and determining an item identification number from the first and second

frequencies, including the substeps of assigning first values equal to a first binary value

to first data bits occupying first data bit positions in the item identification number for the

first frequencies (if a circuit resonates at a particular frequency, then a binary "1" is

assigned, see column 5 lines 51-58); and assigning second values equal to a second

binary value to second data bits occupying second data bit positions in the item

identification number for the second frequencies (if no circuit resonates at the particular

frequency, a binary "0" is assigned, see column 5 lines 58-66) (see figures 1a, 2, 4a, 6,

column 3 lines 25-46, column 4 lines 24-36, column 4 line 59 - column 6 line 40, column

6 lines 50-59, and column 7 lines 11-28).

Re claim 5: Blama also teaches a method of identifying an item (an item

associated or attached to a tag 10) comprising the steps of: interrogating antennas

(coils 12); receiving a plurality of different first frequencies from the antennas (signals

from circuits, C_1-C_N for example, each resonating at a particular frequency transmitted

by the interrogator 22); determining from a second frequency of the first frequencies that

the antennas are associated with an item label (a second frequency, from circuit C_2, for

example, is used with the other frequencies to determine a tag identification number,

and thus determine that the signals were received from a particular tag); determining

third frequencies equal to a remainder of the first frequencies (frequencies from circuits C_3-C_N); determining fourth frequencies associated with the item label which were not received (for example, the interrogator 22 transmits a frequency at which there is no resonant circuit on the tag 10); and determining an item identification number from the third and fourth frequencies (the receipt of the third and fourth signals are used to determine a tag identification number, and thus determine that the signals were received from a particular tag), including the substeps of assigning first values equal to a first binary value to first data bits occupying first data bit positions in the item identification number for the third frequencies (if a circuit resonates at a particular frequency, then a binary "1" is assigned, see column 5 lines 51-58); and assigning second values equal to a second binary value to second data bits occupying second data bit positions in the item identification number for the fourth frequencies (if no circuit resonates at the particular frequency, a binary "0" is assigned, see column 5 lines 58-66) (see figures 1a, 2, 4a, 6, column 3 lines 25-46, column 4 lines 24-36, column 4 line 59 - column 6 line 40, column 6 lines 50-59, and column 7 lines 11-28).

Re claims 6 and 7: Blama also teaches a method of identifying an item (an item associated or attached to a tag 10) comprising the steps of: transmitting a plurality of different signals at a plurality of different frequencies (the interrogator 22 transmits signals at a plurality of different frequencies, see column 7 lines 11-28); receiving a first signal having a first frequency (signals from circuit C_1 for example, resonating at a particular frequency transmitted by the interrogator 22); receiving second different signals having second different frequencies (from circuit C_2 for example, resonating at

another particular frequency transmitted by the interrogator 22); determining from receipt of the first signal that the first and second signals were reflected from antennas (coils 12) of an item label (tag 10); determining first data bit signals in the second different signals having first data bit signal frequencies (the resonance of a circuit defines a first data bit); determining second data bit signals having second data bit signal frequencies which were not received from the item label (the non-resonance of a circuit defines a second data bit); and determining an item identification number from the first and second data bit signal frequencies, including the substeps of assigning first values equal to a first binary value to first data bits occupying first data bit positions in the item identification number for the first data bit signal frequencies (if a circuit resonates at a particular frequency, then a binary "1" is assigned, see column 5 lines 51-58); and assigning second values equal to a second binary value to second data bits occupying second data bit positions in the item identification number for the second data bit signal frequencies (if no circuit resonates at the particular frequency, a binary "0" is assigned, see column 5 lines 58-66) (see figures 1a, 2, 4a, 6, column 3 lines 25-46, column 4 lines 24-36, column 4 line 59 - column 6 line 40, column 6 lines 50-59, and column 7 lines 11-28).

Re claims 10 and 12: Blama also teaches a radio frequency item (an item associated or attached to a tag 10) identification system comprising: an RF interrogator (22) which interrogates antennas (coils 12) affixed to the item as part of an item label (tag 10) and which receives first signals having first frequencies (signals from circuit C_1 for example, resonating at a particular frequency transmitted by the interrogator 22);

and a computer (the control electronics of the interrogator, for example) which establishes a mapping of a plurality of different frequencies including the first frequencies to a plurality of different data bit positions in an item identification number (see figure 6), which determines second signals having second frequencies within the plurality of different frequencies that were not received by the RF interrogator (for example, the interrogator 22 transmits a frequency at which there is no resonant circuit on the tag 10), and which determines the item identification number from the first and second frequencies by assigning first values equal to a first binary value to first data bits occupying first data bit positions in the item identification number for the first frequencies (if a circuit resonates at a particular frequency, then a binary "1" is assigned, see column 5 lines 51-58) and by assigning second values equal to a second binary value to second data bits occupying second data bit positions in the item identification number for the second frequencies (if no circuit resonates at the particular frequency, a binary "0" is assigned, see column 5 lines 58-66) (see figures 1a, 2, 4a, 6, column 3 lines 25-46, column 4 lines 24-36, column 4 line 59 - column 6 line 40, column 6 lines 50-59, and column 7 lines 11-28).

Re claim 11: Blama also teaches a radio frequency item (an item associated or attached to a tag 10) identification system comprising: an RF interrogator (22) which transmits first signals at a plurality of different first frequencies (see column 7 lines 11-28) and which receives second signals at second frequencies including a third signal at a third frequency (second signals, third signals, etc., from circuits C_1, C_2, etc., each resonating at a particular frequency transmitted by the interrogator 22); a computer (the

control electronics of the interrogator, for example) which determines from the third

signal that the second signals are from an item label (the receipt of the second and third

signals are used to determine a tag identification number, and thus determine that the

signals were received from a particular tag), which determines fourth signals at fourth

frequencies associated with the item label that were not received by the RF interrogator

(for example, the interrogator 22 transmits a frequency at which there is no resonant

circuit on the tag 10), and which determines an item identification number from the

second and fourth frequencies by assigning first values equal to a first binary value to

first data bits occupying first data bit positions in the item identification number for the

second frequencies (if a circuit resonates at a particular frequency, then a binary "1" is

assigned, see column 5 lines 51-58) and assigning second values equal to a second

binary value to second data bits occupying second data bit positions in the item

identification number for the fourth frequencies (if no circuit resonates at the particular

frequency, a binary "0" is assigned, see column 5 lines 58-66) (see figures 1a, 2, 4a, 6,

column 3 lines 25-46, column 4 lines 24-36, column 4 line 59 - column 6 line 40, column

6 lines 50-59, and column 7 lines 11-28).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blama in view of Roesner et al (US 5,583,819).

The teachings of Blama have been discussed above.

Blama fails to specifically teach determining a check bit signal in the second different signals having a check bit signal frequency, or determining a check bit signal having a check bit signal frequency which was not received from the item label; assigning a check bit value of one to a check bit, or assigning a check bit value of zero to a check bit, respectively; and applying the check bit to the item identification number resulting from the first and second data bits.

Roesner et al teaches a method of reading a radio frequency identification label (tag), including: receiving a radio frequency signal, determining a check bit (parity bit) signal in the radio frequency signal; assigning a check bit value of a one or a zero to the check bit; and applying the check bit to a bit stream (see column 7 lines 43-48, column 7 line 64 - column 8 line 5, and column 12 lines 42-49).

In view of Roesner et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to include, with the method as taught by Blama, determining a check bit signal in the second different signals having a check bit signal frequency, or determining a check bit signal having a check bit signal frequency which was not received from the item label; assigning a check bit value of one to a check bit, or assigning a check bit value of zero to a check bit, respectively; and applying the check bit to the item identification number resulting from the first and second data bits, in order to detect errors in the signal received from the item label.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tyren et al (US 5,001,458), Hazelrigg, Jr. (US 5,481,102), Lauro et al (US 5,604,485), Lastinger (US 6,104,311), Blama (US RE37,956 E), and Brady et al (WO 96/13793 A1) all teach systems and methods for reading radio frequency identification tags.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jared J. Fureman whose telephone number is (703) 305-0424. The examiner can normally be reached on 7:00 am - 4:30 PM M-T, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (703) 305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

June 28, 2003

Jared J. Fureman

Art Unit 2876